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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,741	03/29/2004	Chuck Fai Lam	19672/00203	1676

26116 7590 01/06/2006

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EXAMINER

KIM, PAUL D

ART UNIT PAPER NUMBER

3729

DATE MAILED: 01/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/811,741

Applicant(s)

LAM ET AL.

Examiner

Paul D. Kim

Art Unit

3729

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-21 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 14-21 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/29/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: ____.

DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: --A METHOD OF FABRICATING A MAGNETIC HEAD CLUSTER--.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Re. Claim 16: The limitation "measuring the resistance of the at least one resistive element" as recited in lines 2-3 does not disclose in the specification.

Re. Claim 19: The limitation "measuring the resistance of the at least one of the plurality of resistive elements" as recited in lines 2-3 does not disclose in the specification.

Claim Objections

3. Claims 15-21 are objected to because of the following informalities:

Re. Claims 15-21: Change the phrase "A method" as recited in line 1 appears to be --The method--.

Re. Claim 16: The phrase "the resistance" as recited in line 2 appears to be a resistance--.

Re. Claim 17: The phrase "the resistance elements" as recited in line 4 is not clear. According to claim 1, there is at least one resistive element, not the resistive elements. The at least one resistive element could be one resistive element.

Re. Claim 19: The limitation "the plurality of resistive elements" recited in line 2 appears to be --a plurality of resistive elements--.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 14-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Applicant Admitted Prior Art (APA).

APA teaches a process of making a magnetic head cluster comprising steps of: providing a substrate (110) as shown in Fig. 1; forming at least two transducer elements (100) on a surface of the substrate as shown in Fig. 2; and forming at least one resistive element (175) on the surface of the substrate between two of the at least two transducer elements as shown in Figs. 1 and 2 (see also from pages 2-4 of the specification).

As per claim 15 an edge portion of the magnetic head cluster is lapped as shown in Fig. 4.

As per claims 16, 17, 19 and 20 APA also teaches that the lapping is performed until the resistance of at least one of the resistive elements reaches a specified resistance. Inherently, a resistance of the at least one resistive element is previously measured and known as an initial resistance. Therefore, the lapping is performed until the resistance of at least one of the resistive element reaches a desired resistance.

As per claim 18 a plurality of resistive elements (two of the resistive elements), and wherein each of the plurality of resistive elements is formed on the surface of the substrate between two of the at least two transducer elements as shown in Figs. 1 and 2.

6. Claims 14-21 are rejected under 35 U.S.C. 102(b) as being anticipated by Li et al. (US PAT. 5,738,566).

Li et al. teach a process of making a magnetic head cluster comprising steps of: providing a substrate (10) as shown in Fig. 1; forming at least two transducer elements (23a,23b) on a surface of the substrate as shown in Figs. 2 and 3; and forming at least one resistive element (20) on the surface of the substrate between two of the at least two transducer elements as shown in Figs. 2 and 3 (see also col. 3, line 21 to col. 4, line 10).

As per claim 15 an edge portion of the magnetic head cluster is lapped as shown in Fig. 3.

As per claims 16, 17, 19 and 20 Li et al. also teach that the lapping is performed until the resistance of at least one of the resistive elements (20) reaches a specified throat height (equivalent with a resistance) of the transducer. Inherently, a resistance of the at least one resistive element is previously measured and known as an initial resistance. Therefore, the lapping is performed until the resistance of at least one of the resistive element reaches a desired resistance.

As per claim 18 a plurality of resistive elements (two of the resistive elements), and wherein each of the plurality of resistive elements is formed on the surface of the substrate between two of the at least two transducer elements as shown in Figs. 2 and 3.

As per claim 21 at least one of the plurality of resistive elements (20) is an electronic lapping guide (ELG).

7. Claims 14-21 are rejected under 35 U.S.C. 102(e) as being anticipated by Reiley et al. (US PAT. 6,699,102).

Reiley et al. teach a process of making a magnetic head cluster comprising steps of: providing a substrate (44) as shown in Fig. 1; forming at least two transducer elements (26) on a surface of the substrate as shown in Fig. 2; and forming at least one resistive element (32) on the surface of the substrate between two of the at least two transducer elements as shown in Fig. 2 (see also col. 4, line 24 to col. 5, line 27).

As per claim 15 an edge portion (16) of the magnetic head cluster is lapped as shown in Fig. 1.

As per claims 16, 17, 19 and 20 Reiley et al. also teach that the lapping is performed until the resistance (a height, h) of at least one of the resistive elements (20) reaches a specified height (equivalent with a resistance) of the transducer. Inherently, a resistance (a height) of the at least one resistive element is previously measured and known as an initial resistance. Therefore, the lapping is performed until the resistance (the height) of at least one of the resistive element reaches a desired resistance (col. 4, lines 47-52).

As per claim 18 a plurality of resistive elements (two of the resistive elements), and wherein each of the plurality of resistive elements is formed on the surface of the substrate between two of the at least two transducer elements as shown in Fig. 2.

As per claim 21 at least one of the plurality of resistive elements (26) is an electronic lapping guide (ELG).

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul D. Kim whose telephone number is 571-272-4565. The examiner can normally be reached on Monday-Friday between 7:00 AM to 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter Vo can be reached on 571-272-4690. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul D Kim
Examiner
Art Unit 3729